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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/753,401	Applicant(s) KIM ET AL.	
	Examiner Parul Gupta	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 and 31-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 and 31-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-23 and 31-44 are pending for examination as interpreted by the examiner. The IDS filed on 3/15/07 was considered. The arguments and amendment filed on 3/5/07 were also considered with the following results.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 5-6, 8-12, 15-17, 19-20, 23, 31-33, 35-36, and 39-44 are rejected under 35 U.S.C. 102(e) as being anticipated by Kuroda et al., US Patent 6,735,155.

Regarding claim 1, Kuroda et al. discloses in figure 7 recording medium, comprising: a data area including at least two data sections ("new data" and "old data" areas); and a linking area to link neighboring data sections, the linking area including at least two linking frames, each linking frame including both at least one sync signal (in each frame) and dummy data (shown in element 44 and "dummy information" as described in abstract), wherein the dummy data is located behind the at least one sync signal in each linking frame (column 8, lines 45-65).

Regarding claim 2, Kuroda et al. discloses from column 1, line 51 to column 2, line 4 the recording medium of claim 1, wherein the dummy data improves reproduction compatibility between the recording medium (medium containing "old data") and at least one other recording media type (medium containing "new data").

Regarding claim 3, Kuroda et al. discloses the recording medium of claim 2, wherein the at least one other recording media type is a write-once or rewritable type (column 1, lines 13-19).

Regarding claim 5, Kuroda et al. discloses in figure 7 the recording medium of claim 1, wherein the at least two linking frames (42 and 42) having a same size (column 7, line 9 explains the size of each element 42, which are all the same).

Regarding claim 6, Kuroda et al. discloses in figure 5 the recording medium of claim 5, wherein each of the at least two linking frames include a same frame pattern of dummy data (column 8, lines 45-65, especially lines 53-55 explain that both old and new dummy data are written in sequence and contain the same content).

Regarding claim 8, Kuroda et al. discloses the recording medium of claim 6, further comprising at least one other linking area including a same area pattern of dummy data as the linking area (column 8, lines 45-65, especially lines 53-55 explain that both old and new dummy data are written in sequence and contain the same content).

Regarding claim 9, Kuroda et al. discloses the recording medium of claim 6, further comprising at least one other linking area including an area pattern of dummy data different from the linking area (column 12, lines 8-34).

Regarding claim 10, Kuroda et al. discloses the recording medium of claim 5, wherein the at least two linking frames include different frame patterns of dummy data (column 12, lines 8-34).

Regarding claim 11, Kuroda et al. discloses the recording medium of claim 10, further comprising at least one other linking area including a same area pattern of dummy data as the linking area (column 8, lines 45-65). Column 12, lines 8-34 and figure 7 shows how the linking areas (40) are repeated.

Regarding claim 12, Kuroda et al. discloses the recording medium of claim 10, further comprising at least one other linking area including an area pattern of dummy data different from the linking area (column 12, lines 8-34).

Regarding claim 15, Kuroda et al. discloses a method of forming a recording medium, comprising: forming a linking area to link neighboring data sections of a data area while recording data onto the recording medium; the linking area including at least two linking frames (elements 42 of figure 7); and writing at least one frame sync signal and dummy data in each linking frame of the linking area (column 12, lines 8-34), the dummy data being located behind the at least one sync signal in each linking frame (column 8, lines 45-65).

Regarding claim 16, Kuroda et al. discloses the method of claim 15, wherein the writing step writes the dummy data with a same size between the recording medium and at least one other recording media type (although CD and DVD-R are both taught in the reference, the frame size is always the same as given in column 7, lines 1-13).

Regarding claim 17, Kuroda et al. discloses the method of claim 15, wherein each of the at least two linking frames include a same frame pattern of dummy data (column 8, lines 45-65, especially lines 53-55 explain that both old and new dummy data are written in sequence and contain the same content).

Regarding claim 19, Kuroda et al. discloses the method of claim 15, wherein the at least two linking frames include different frame patterns of dummy data (column 8, lines 58-65). The given section explains the discrepancy between the old dummy area and the new dummy area, suggesting that the old and new frames contain a different pattern.

Regarding claim 20, Kuroda et al. discloses the method of claim 19, wherein forming step forms at least one other linking area including a same area pattern of dummy data as the linking area (column 8, lines 45-65, especially lines 53-55 explain that both old and new dummy data are written in sequence and contain the same content).

Regarding claim 23, Kuroda et al. discloses a method of reproducing data from a recording medium, comprising: utilizing a linking area which links neighboring data sections of a data area, to reproduce the data (column 2, lines 33-44), the linking area including at least two linking frames (elements 42 of figure 7), each linking frame including at least one frame sync signal (signal within frame) and dummy data (column 12, lines 8-34), the dummy data being located behind the at least one sync signal in each linking frame (column 8, lines 45-65).

Regarding claim 31, Kuroda et al. discloses a method of recording data on a recording medium, comprising: utilizing a linking area which links neighboring data sections of a data area, to record the data (column 2, lines 33-44), the linking area including at least two linking frames (elements 42 of figure 7), each linking frame including at least one frame sync signal (signal within frame) and dummy data (column

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12, lines 8-34), the dummy data being located behind the at least one sync signal in each linking frame (column 8, lines 45-65).

Regarding claim 32, Kuroda et al. discloses the method of claim 31, wherein the utilizing step includes writing the dummy data with a same size between the recording medium and at least one other recording media type (although CD and DVD-R are both taught in the reference, the frame size is always the same as given in column 7, lines 1-13).

Regarding claim 33, Kuroda et al. discloses the method of claim 31, wherein the at least two linking frames include a same frame pattern of dummy data (column 8, lines 45-65, especially lines 53-55 explain that both old and new dummy data are written in sequence and contain the same content).

Regarding claim 35, Kuroda et al. discloses the method of claim 31, wherein the at least two linking frames include different frame patterns of dummy data (column 12, lines 8-34).

Regarding claim 36, Kuroda et al. discloses the method of claim 35, wherein at least one other linking area on the recording medium includes a same area pattern of dummy data as the linking area (column 8, lines 45-65, especially lines 53-55 explain that both old and new dummy data are written in sequence and contain the same content).

Regarding claim 39, Kuroda et al. discloses an apparatus for reproducing data from a recording medium comprising: an optical pickup configured to read a linking area (elements 42 of figure 7), which links neighboring data sections of a data area, to

reproduce data, the linking area including at least two linking frames (elements 42 of figure 7), each linking frame including at least one frame sync signal (signal within frame) and dummy data (column 12, lines 8-34), the dummy data being located behind the at least one sync signal (column 8, lines 45-65); and a controlling unit (element 8 of figure 3) configured to determine whether a currently read area is the linking area based on the frame sync signal (part of the ID section of element 21 of figure 7) read by the optical pickup, and controlling a reproduction according to a result of the determination. The given reference uses the address information of the ID section to make the determination of where the pickup is currently reading.

Regarding claim 40, Kuroda et al. discloses the apparatus of claim 39, wherein the controlling unit is configured to control the reproduction such that data within the neighboring data sections of the data area is reproduced continuously if the controlling unit determines the currently the currently read area is not the linking area (column 9, lines 15-60), and the data within the neighboring data sections of the data area is reproduced excluding the dummy data if the controlling unit determines the currently read area is the linking area (column 9, lines 15-60 explains that the address of the neighboring data sections is searched for until detected, thus excluding the dummy data of the linking area).

Regarding claim 41, Kuroda et al. discloses a recording medium comprising: a data area including at least two data sections (elements 40 of figure 7), each data section including at least one sync signal (part of element 21 preceding element 40 of figure 7); and a linking area which links neighboring data sections of the data area

(elements 42 of figure 7) and includes at least two linking frames ("sync frames" of column 10, line 28) each linking frame including at least one frame sync signal and dummy data, wherein the sync signal (part of element 21 preceding element 42 of figure 7) precedes the dummy data in each linking frame of the linking area (column 12, lines 8-34), and a size of the at least two linking frames is the same as that included in a write-once or rewritable medium (column 7, line 9 explains the size of each element 42, which are all the same).

Regarding claim 42, Kuroda et al. discloses the method of claim 23, wherein the utilizing step comprises: detecting the at least one frame sync signal (part of the ID section of element 21 of figure 7) included in the linking frame of the linking area (done by element 8 of figure 3); and determining whether a currently read area is the linking area based on the detected frame sync signal (part of the ID section of element 21 of figure 7). The processor of element 8 of figure 3 makes the determination based on the addressing information given in the ID section of the frame, of which the sync signal is a part.

Regarding claim 43, Kuroda et al. discloses the method claim 42, further comprising: reproducing data within the neighboring data sections of the data area excluding the dummy data of a currently read area if the determining step determines the currently read area is the linking area (column 9, lines 15-60 explains that the address of the neighboring data sections is searched for until detected, thus excluding the dummy data of the linking area).

Regarding claim 44, Kuroda et al. discloses the method of claim 42, further comprising: reproducing data within the neighboring data sections of the data area continuously if the determining step determines a currently read area is not the linking area (column 9, lines 15-60).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 4, 7, 13, 18, 21-22, 34, and 37-38 rejected under 35 U.S.C. 103(a) as being unpatentable over Kuroda et al. in view of Ueda et al. US Patent Publication 2001/0026511.

Kuroda et al. teaches all of the limitations of claims 1, 6, 10, 17, 19, 33, and 35 but fails to teach the further limitations of claims 4, 7, 13, 18, 21-22, 34, and 37-38.

Regarding claim 4, Ueda et al. teaches in paragraph 0117 the recording medium of claim 1, wherein the dummy data is located in an area of the linking area ("data buffer") reserved for user data. This is evidenced by the fact that the dummy data is used to replace the data stored in the buffer.

Regarding claim 7, Ueda et al. teaches the recording medium of claim 6, wherein the same frame pattern of dummy data is at least one of "00h", "01h", "10h", "08h", "AAh", and "FFh". Paragraph 0117 explains that the dummy data is 00h.

Regarding claim 13, Ueda et al. teaches the recording medium of claim 10, wherein each of the different frame patterns of dummy data is at least one of "00h", "01h", "10h", "08h", "AAh", and "FFh". Paragraph 0117 explains that the dummy data is 00h.

Regarding claim 14, Ueda et al. teaches the recording medium of claim 10, wherein one of the different frame patterns is "08h" and another of the different frame patterns is "00h". Paragraph 0117 explains that the dummy data is 00h. Ueda et al. does not explicitly teach "08h". It would have been an obvious matter of design choice to modify Ueda et al. to have the specific values for the patterns of dummy data, since the applicant has not disclosed that those specific values solves any stated problem or is for any particular purpose and it appears that any values would perform equally well as long as the value of "00h" is used last to yield the same result.

Regarding claim 18, Ueda et al. teaches the method of claim 17, wherein the same frame pattern of dummy data is at least one of "00h", "01h", "10h", "08h", "AAh", and "FFh". Paragraph 0117 explains that the dummy data is 00h.

Regarding claim 21, Ueda et al. teaches the method of claim 19, wherein each of the different frame patterns is at least one of "00h", "01h", "10h", "08h", "AAh", and "FFh". Paragraph 0117 explains that the dummy data is 00h.

Regarding claim 22, Ueda et al. teaches the method of claim 19, wherein one of the different frame patterns is "08h" and another of the different frame patterns is "00h". Paragraph 0117 explains that the dummy data is 00h. Ueda et al. does not explicitly teach "08h". It would have been obvious matter of design choice to modify Ueda et al.

to have the specific values for the patterns of dummy data, since the applicant has not disclosed that those specific values solves any stated problem or is for any particular purpose and it appears that any values would perform equally well as long as the value of "00h" is used last to yield the same result.

Regarding claim 34, Ueda et al. teaches the method of claim 33, wherein the same frame pattern of dummy data is at least one of "00h", "01h", "10h", "08h", "AAh", and "FFh". Paragraph 0117 explains that the dummy data is 00h.

Regarding claim 37, Ueda et al. teaches the method of claim 35, wherein each of the different frame patterns of dummy data is at least one of "00h", "01h", "10h", "08h", "AAh", and "FFh". Paragraph 0117 explains that the dummy data is 00h.

Regarding claim 38, Ueda et al. teaches the method of claim 35, wherein one of the different patterns of dummy data is "08h" and another of the different patterns of data is "00h". Paragraph 0117 explains that the dummy data is 00h. Ueda et al. does not explicitly teach "08h". It would have been obvious matter of design choice to modify Ueda et al. to have the specific values for the patterns of dummy data, since the applicant has not disclosed that those specific values solves any stated problem or is for any particular purpose and it appears that any values would perform equally well as long as the value of "00h" is used last to yield the same result.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include the concept of the given values of dummy data recorded in the given area as taught by Ueda et al. into the system of Kuroda et al. The motivation

would be to ease in the recovery process in the event of an error (paragraph 0123 of Ueda et al.).

Response to Arguments

4. Applicant's arguments with respect to all claims have been considered but are not persuasive. Applicant contends that the given frames do not contain signals in addition to dummy data where the dummy data is located behind the sync signal. However, each frame contains a signal or dummy data in the order given by applicant. Thus, it serves the same purpose to have the information be in two frames or one frame. The data is still both there in the same order.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Parul Gupta whose telephone number is 571-272-5260. The examiner can normally be reached on Monday through Thursday, from 9:30 AM to 6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on 571-272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PHG
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/William Korzuch/
SPE, Art Unit 2627